

Thermal Print head **TPH 15222.xx**

Two inch Thermal Printhead, 640 dots, 11.85 dots/mm, serial input

The following parameters are valid for a thermal print head, that means for a ceramic hybrid, mounted on an appropriate cooling plate to guarantee a good thermal contact and to transport the unnecessary heat away from the head.

The mechanical design of the cooling plate, the pin out as well as the operating conditions can be defined together with the customer or modified to satisfy his needs.

Major changes to standard heads or new designs to fit into new applications are welcome to be discussed with the developing engineers of the OECA.

For more detailed information please refer to the complete specification.

Main features

- Number of Heat Elements : 640dots
- Heat element pitch : 0.0844 mm (11.85 dots/mm)
- Print width: 54 mm
- Average Resistor Value: 1250Ω
- serial interface 6 MHz
- printing speed up to 100 mm/s
- Controlled current ramping. transient and EMI reduction
- EEPROM M24C02-WMN6
- Suitable for multicolour printing (software controlled)
- anti abrasion coating TPH 15222.31
- ESD protection TPH 15222.31

General characteristics

Characteristics	Value	Unit	Note
Print Width	54.02	mm	(2 inch)
Number of Dots	640	dots	
Dot Pitch	0.0844	mm	
Dot Density	11.85	dots/mm	
Dot Resistance	1250	Ω	Typical mean value
Dot Resistance Variation	10	%	Max. variation within head

Maximum ratings

Voltage referenced to V_{SS} terminal. All heating element (dot) ratings are valid only with paper in contact with the heating element.

Symbol	Parameter	min.	max.	Unit
V_{DD}	DC Logic Supply Voltage Range	-0.3	6	V dc
V_{BR}	IC Breakdown Voltage Range		30	V dc
V_{IN}	Input Voltage Range, All Inputs	-0.3	$V_{DD}+0.3$	V dc
I_{IN}	DC Input Current, Any One Input		± 10	mA dc
V_{dot}	DC Driver Transistor Supply Voltage	0	26.4	V dc
P_{dotMAX}	Dot Power (1250 Ω)		0.56	W/Dot
E_{dotMAX}	Dot Energy		0.22	mJ/Dot
DC	Duty Cycle (ratio t_{ON} / t_{CYCLE})		40	%
N_{dotMAX}	Number of burning dots at same time per chip		100	%
T_{sub}	Substrate Operating Temperature		+65	$^{\circ}C$

Electrical operating conditions

Operating conditions at $T_{AMB}=+25^{\circ}C$. For maximum reliability, operating conditions should be selected within the following ranges.

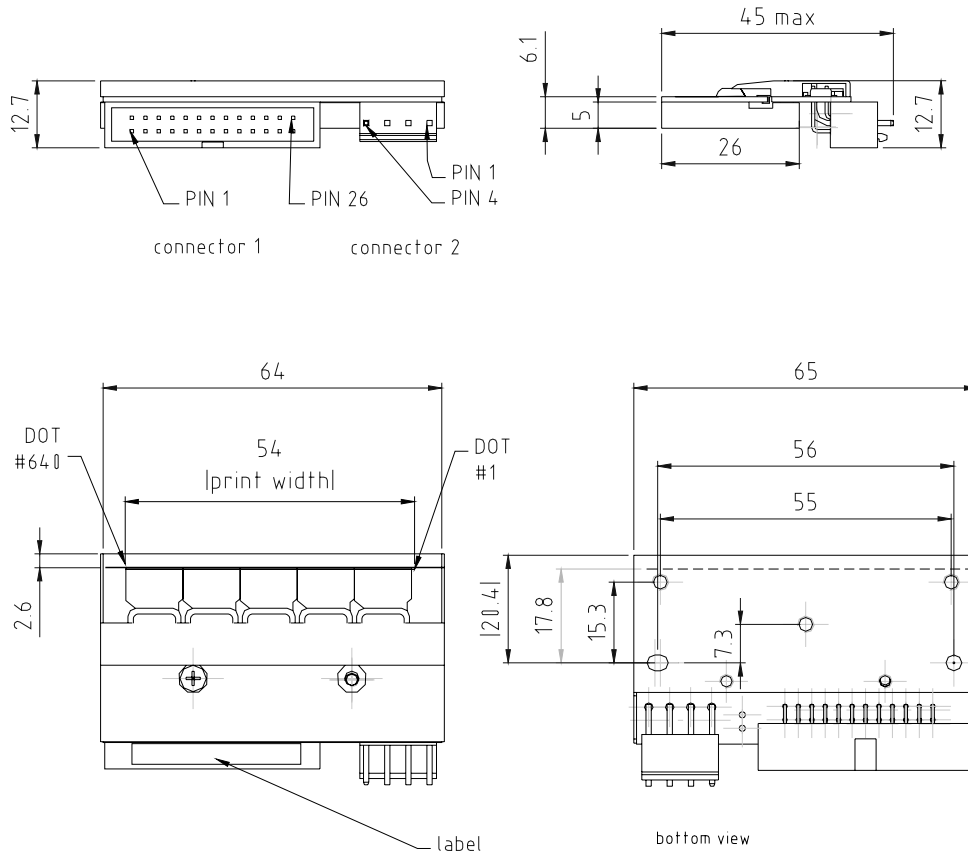
Symbol	Parameter	Conditions	min	max.	Unit
V_{DD}	Logic Supply Voltage Range	-	4.75	5.25	V
V_{dot}	DC Driver Transistor Supply Voltage	-	21.6	26.4	V
f_{CLK}	Maximum Input Clock Frequency	4.75-5.25V	-	6.0	MHz

Expected lifetime

When operating according to specified printing conditions the expected lifetime for OECA-Standard Thermal print heads, manufactured all with the same technology and with the same base material, is as follows:

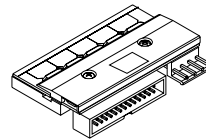
Parameter	Value	Unit	Condition	Note
Strobe pulses	2×10^8			
Mechanical wear	150 100	km km	KLS 46 ; Ricoh 130 LAB	TPH 15222.31 TPH 15222.30

Mechanical outline



Connector 1: 636- 2607 (or equivalent)
Connector 2: JST B4PS- VH

tolerances acc. to DIN ISO 2768mH
all dimension in mm



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